



NABORS

**COMPLETION
& PRODUCTION
SERVICES CO.**

COMPENSATED DENSITY/NEUTRON LOG

Company	RITCHIE EXPLORATION, INC.		
Well	#1 ROEMER UNIT		
Field			
County	LANE	State	KANSAS
Location:	2385' FEL & 1235' FNL 85' N. & 75' W. OF W/2 - W/2 - NE 1/4 SEC 7 TWP 16S RGE 29W		API # : 15-101-22449-0000 Other Services DIL
Permanent Datum	GROUND LEVEL	Elevation	2711
Log Measured From	KELLY BUSHING 8' A.G.L.		
Drilling Measured From	KELLY BUSHING	Elevation	K.B. 2719 D.F. 2717 G.L. 2711
Date	7/20/13		
Run Number	ONE		
Depth Driller	4530		
Depth Logger	4532		
Bottom Logged Interval	4508		
Top Log Interval	3350		
Casing Driller	8 5/8" @ 235'		
Casing Logger	NA		
Bit Size	7 7/8		
Type Fluid in Hole	CHEMICAL MUD	CHLORIDES 3500 PPM	
Density / Viscosity	9.4/5.1		
pH / Fluid Loss	10.0/8.0		
Source of Sample	FLOWLINE		
Rin @ Meas. Temp	1.5 @ 94F		
Rinf @ Meas. Temp	1.1 @ 94F		
Rinc @ Meas. Temp	1.8 @ 94F		
Source of Rinf / Rinc	MEASURED		
Rin @ BHT	1.1 @ 121F		
Time Circulation Stopped	2 HOURS		
Time Logger on Bottom			
Maximum Recorded Temperature	121F		
Equipment Number	680		
Location	HAYS, KS.		
Recorded By	JASON CAPPELLUCCI		
Witnessed By	DAVE WILLIAMS		

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

THANK YOU FOR USING NABORS COMPLETION & PRODUCTION SVCS. (785) 628-6395

DIRECTIONS:

GOVE, KS. - S. TO GOVE LANE CO. LINE RD. - 2 W. TO HICKOCK RD.
S. TO RD. 275 - 1/2 W. - N. INTO

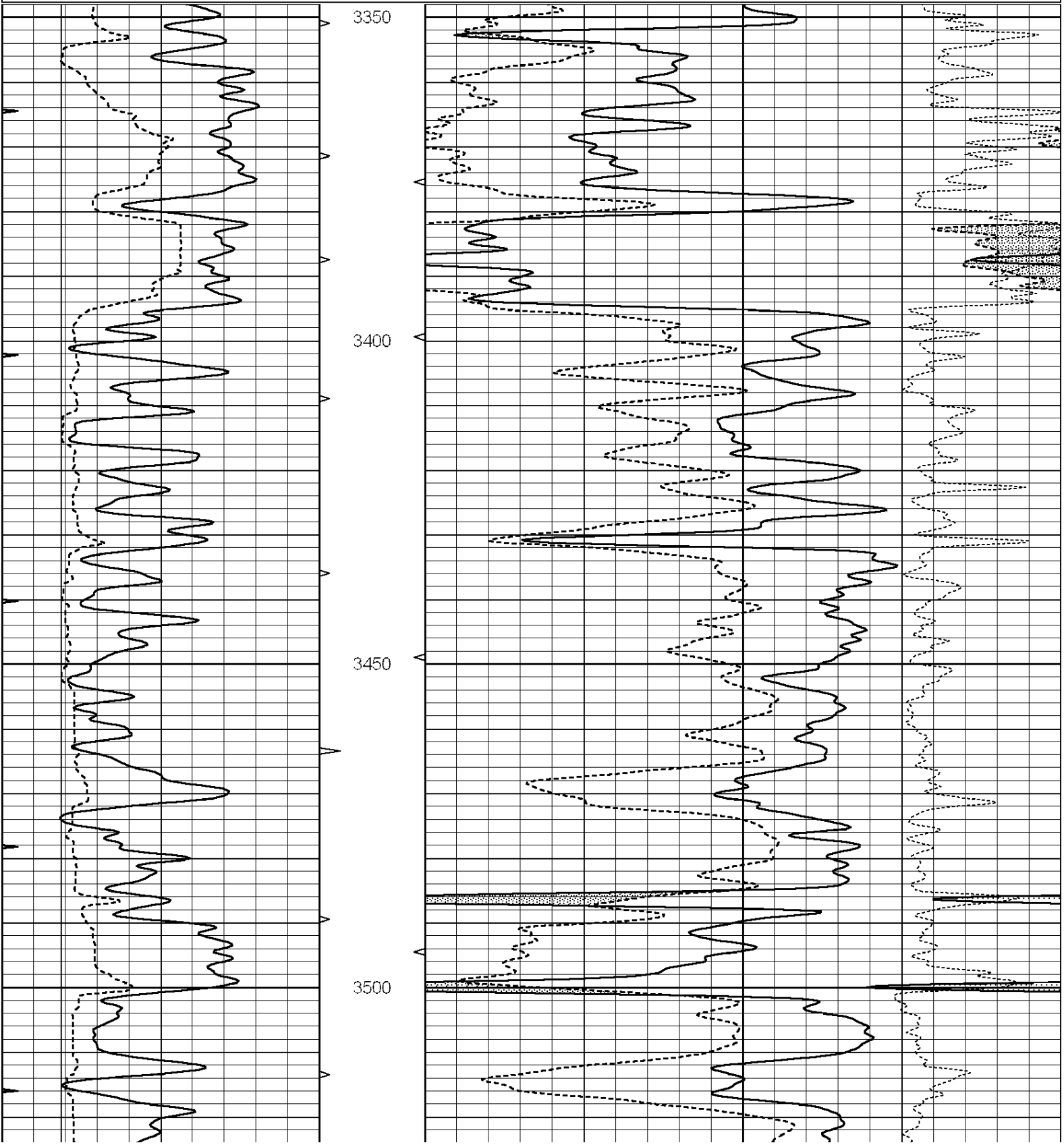


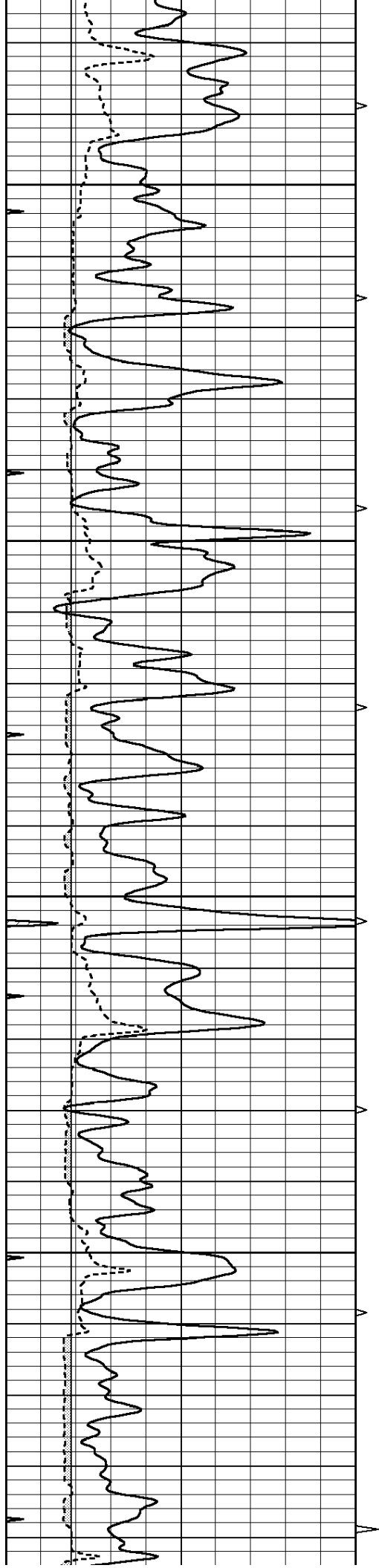
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MAIN SECTION

Database File: 011274ddn.db
Dataset Pathname: pass3.1
Presentation Format: _den_neu
Dataset Creation: Sat Jul 20 19:16:10 2013
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	AVTX	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	BVTX		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		



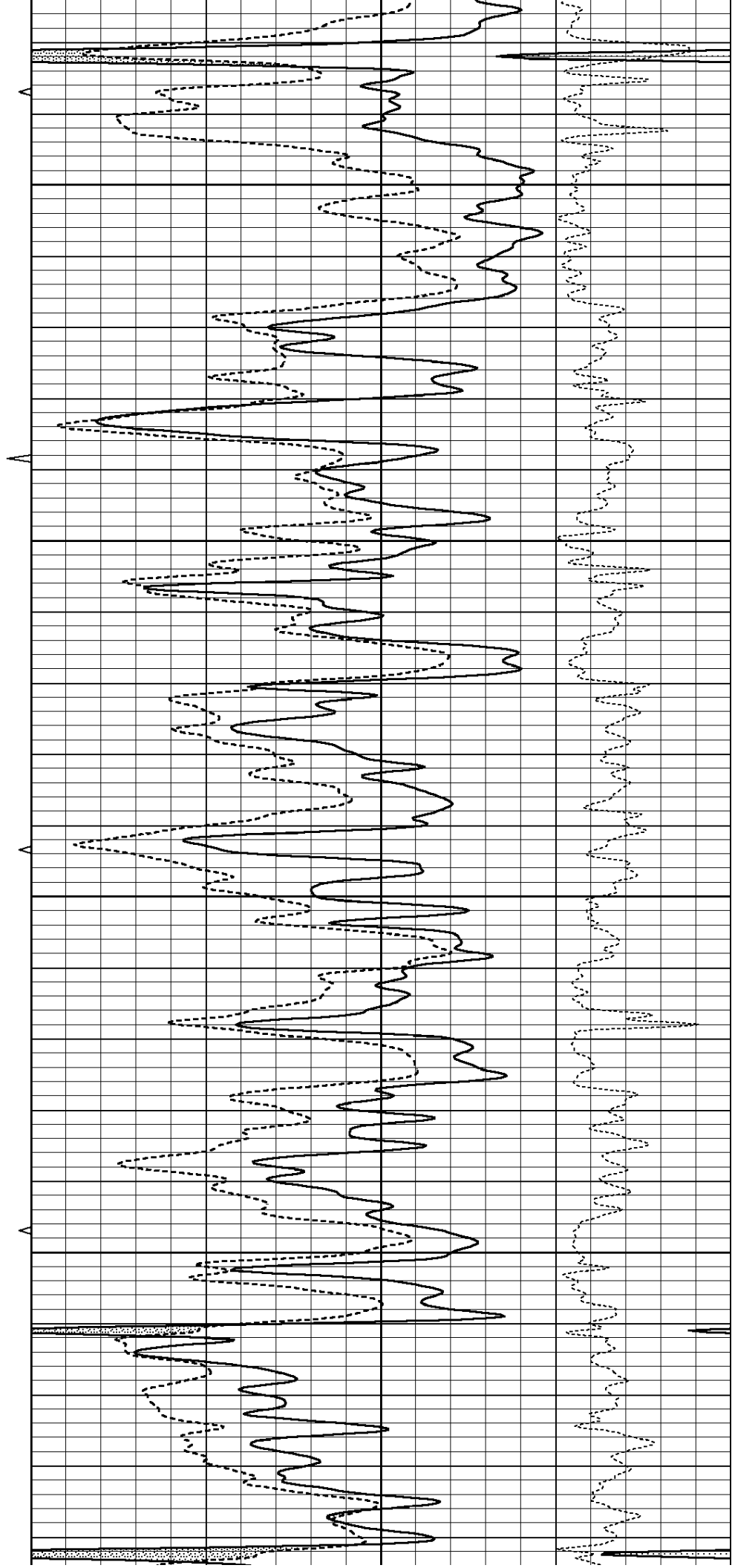


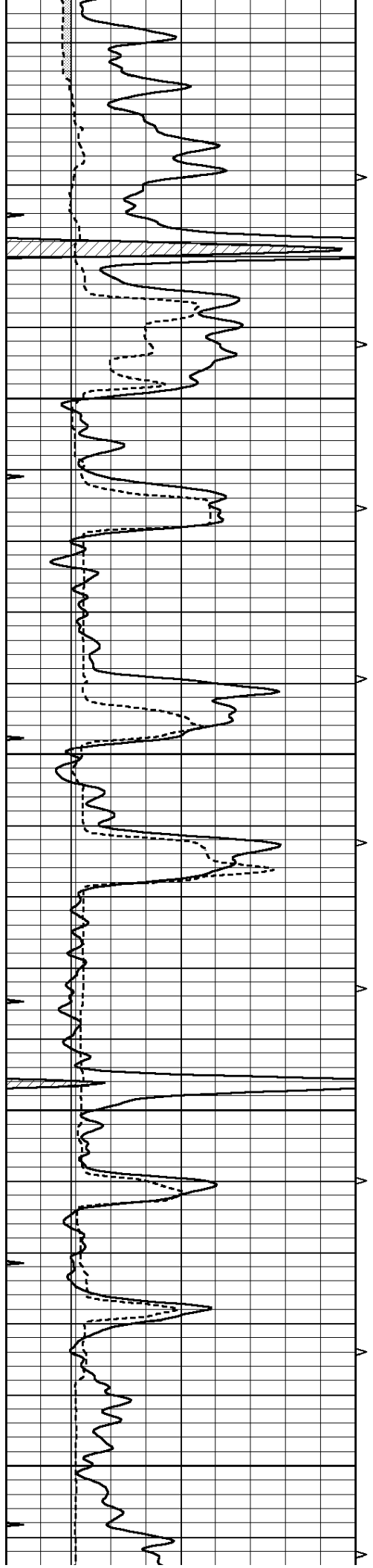
3550

3600

3650

3700





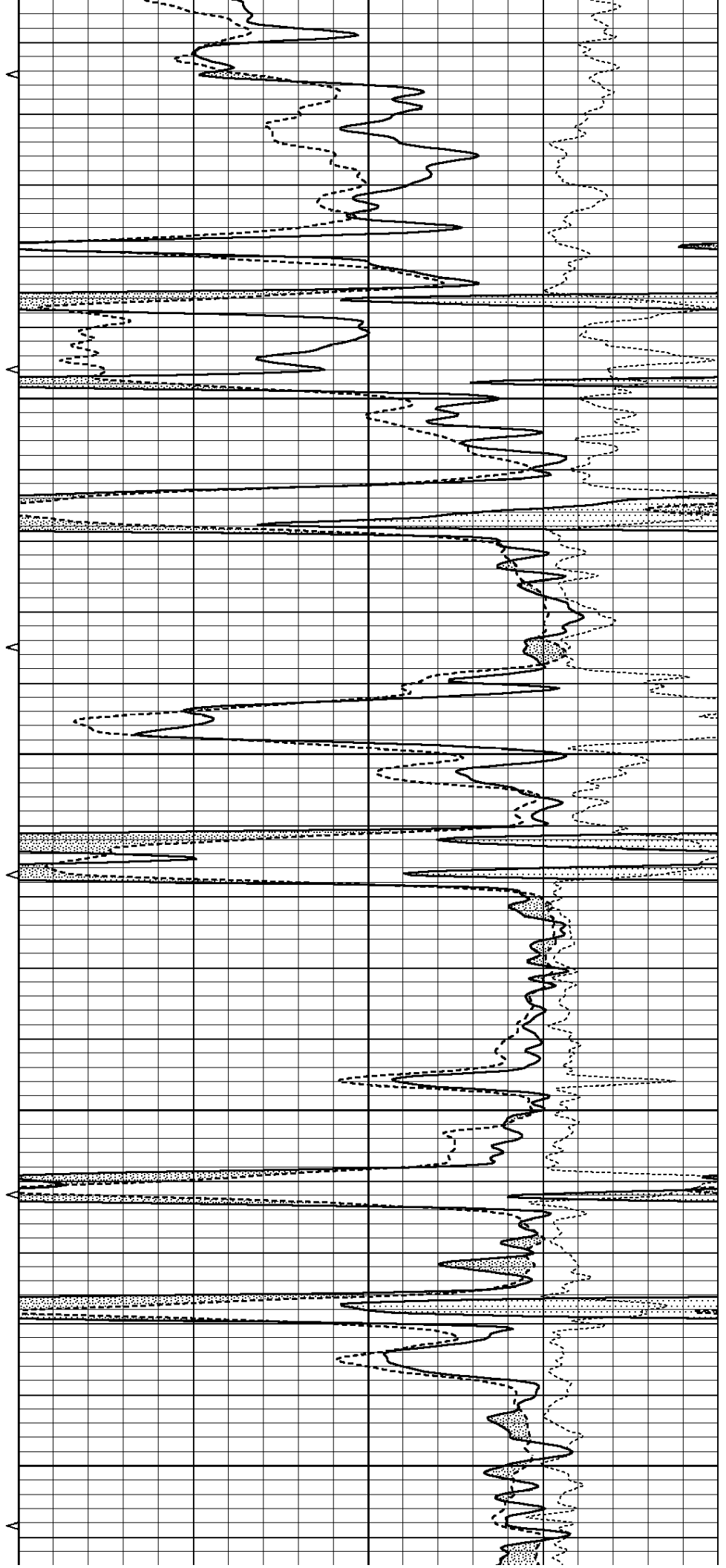
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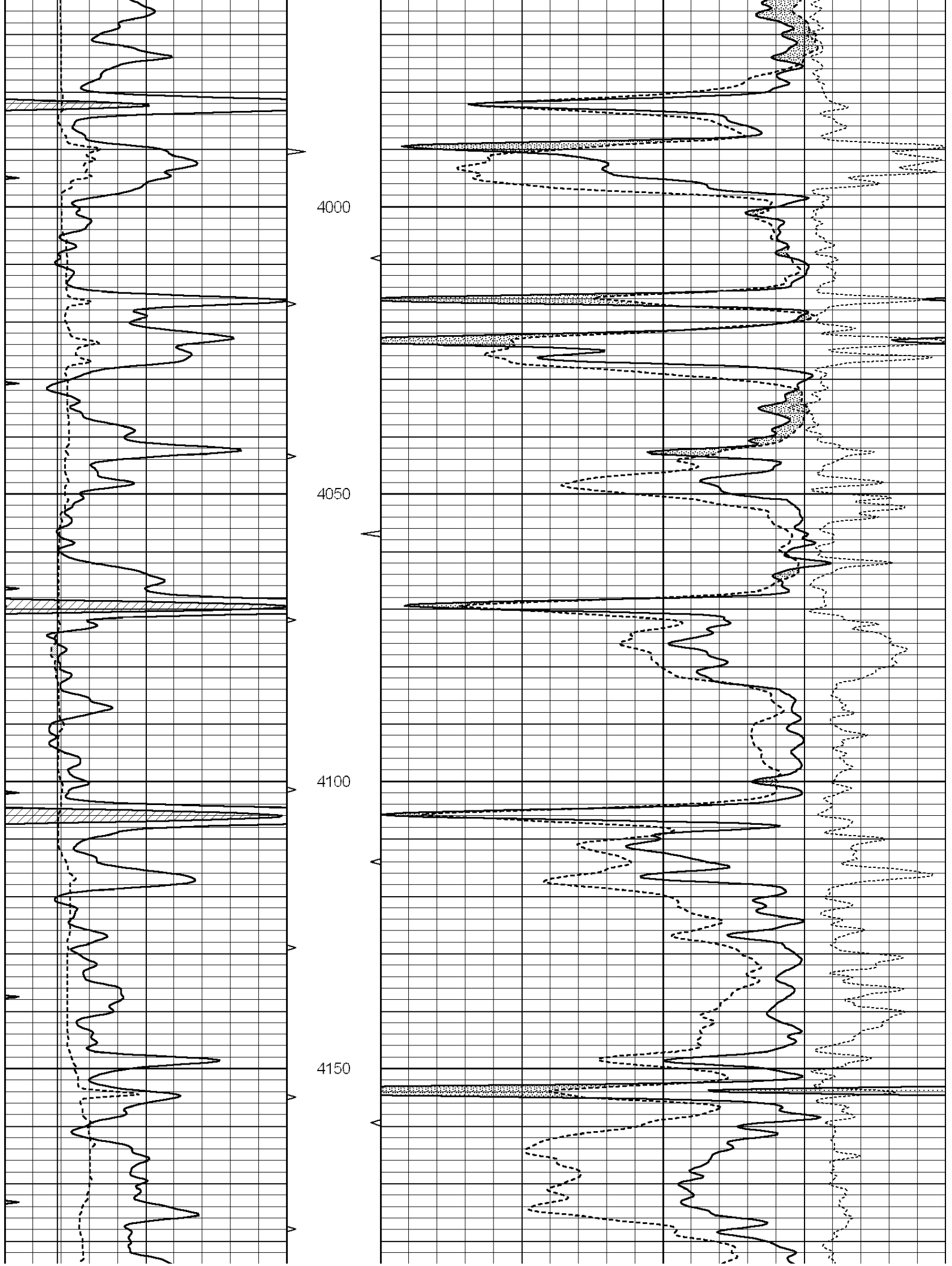
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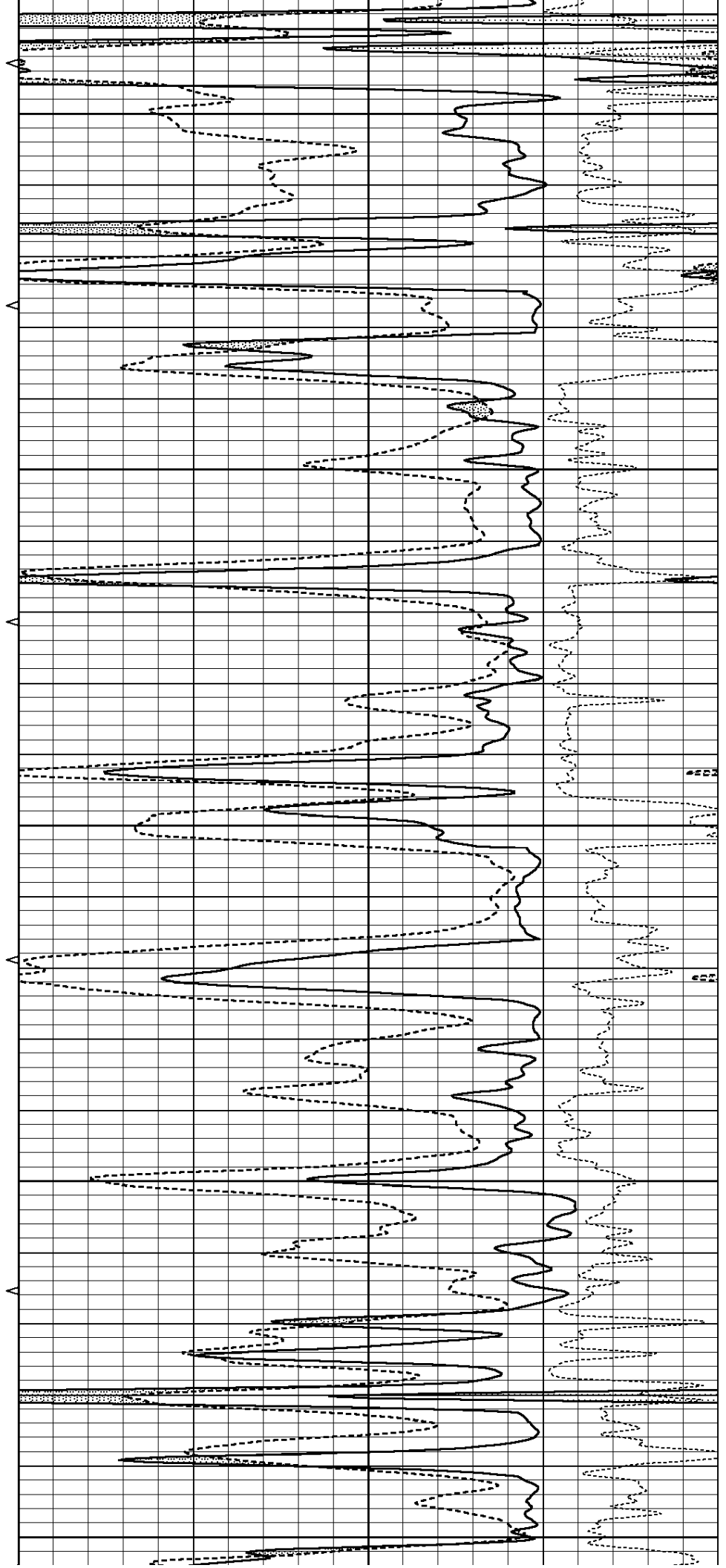
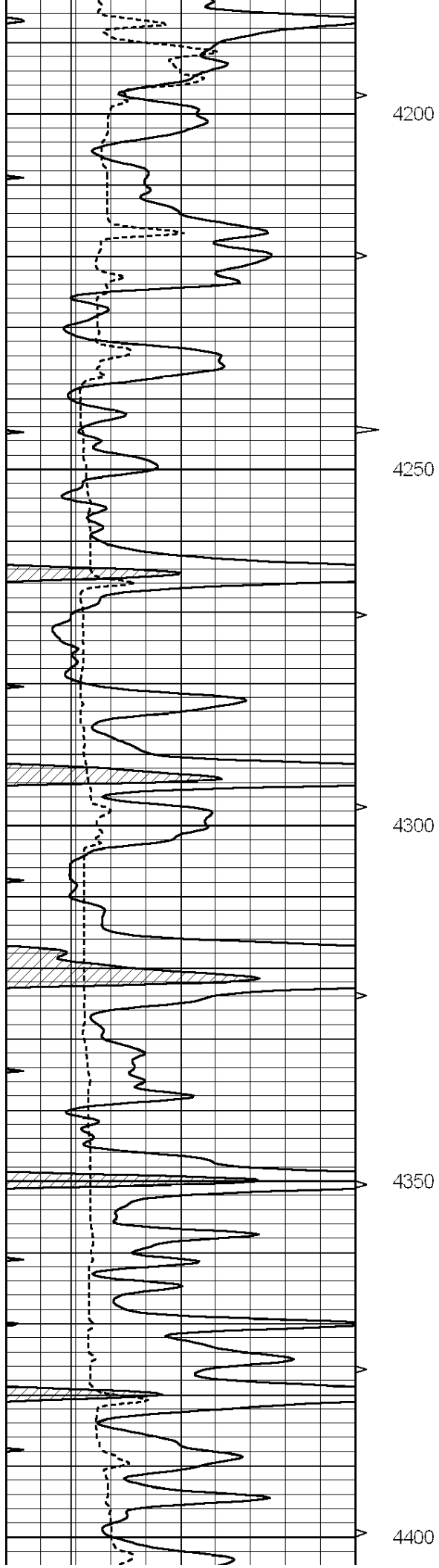
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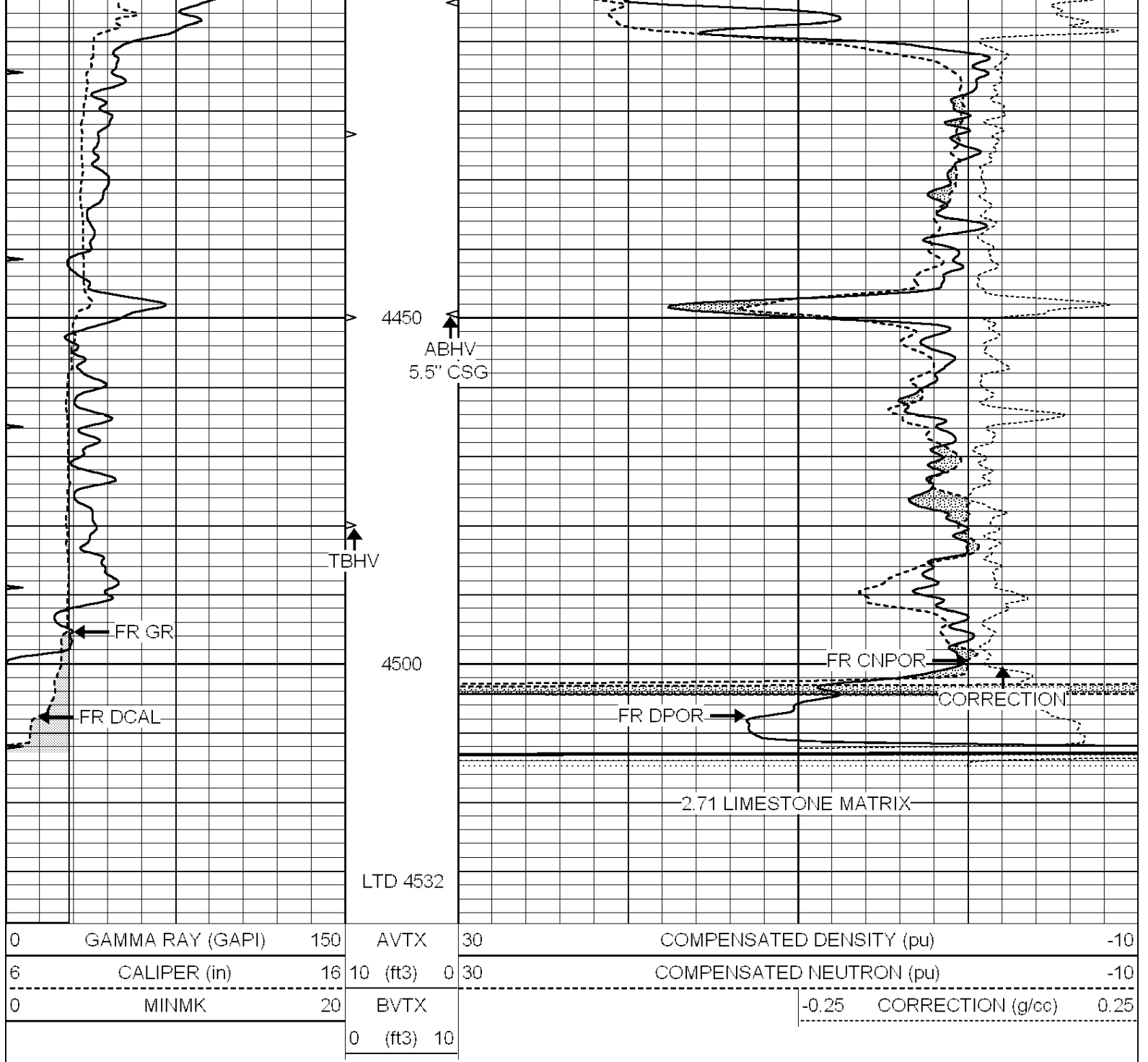
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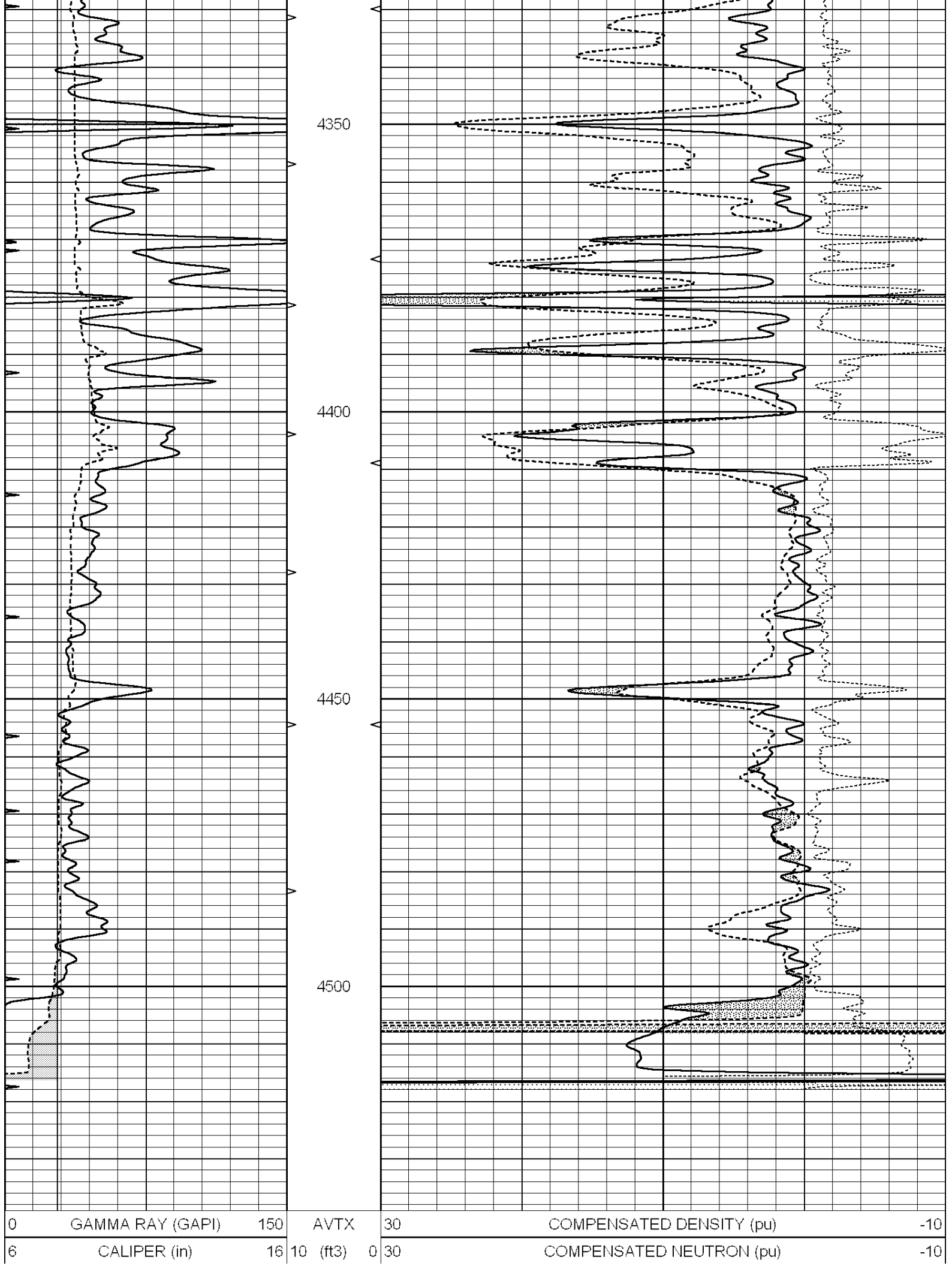


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REPEAT SECTION

Database File: 011274ddn.db
Dataset Pathname: pass2.1
Presentation Format: _den_neu
Dataset Creation: Sat Jul 20 18:57:56 2013 by Calc Open-Cased 090629
Charted by: Depth in Feet scaled 1:240

0	GAMMA RAY (GAPI)	150	AVTX	30	COMPENSATED DENSITY (pu)	-10
6	CALIPER (in)	16	10 (ft3)	0 30	COMPENSATED NEUTRON (pu)	-10
0	MINMK	20	BVTX		-0.25 CORRECTION (g/cc)	0.25
			0 (ft3)	10		



0	MINMK	20	BVTX	-0.25	CORRECTION (g/cc)	0.25
		0	(ft3) 10			

Calibration Report

Database File: 011274ddn.db
Dataset Pathname: pass2.1
Dataset Creation: Sat Jul 20 18:57:56 2013 by Calc Open-Cased 090629

Dual Induction Calibration Report

Serial-Model: PROBE8-DILG
Surface Cal Performed: Fri Aug 01 06:33:19 2008
Downhole Cal Performed: Mon Jul 28 11:08:27 2008
After Survey Verification Performed: Mon Jul 28 11:08:27 2008

Surface Calibration

Readings				References			Results	
Loop:	Air	Loop		Air	Loop		m	b
Deep	0.015	0.648	V	0.000	400.000	mmho/m	632.616	-9.730
Medium	0.029	0.796	V	0.000	464.000	mmho/m	605.049	-17.680
Internal:	Zero	Cal		Zero	Cal		m	b
Deep	0.017	0.657	V	0.000	400.000	mmho/m	625.153	-10.619
Medium	0.016	0.757	V	0.000	464.000	mmho/m	625.992	-9.739

Downhole Calibration

Readings				References			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	2.011	405.777	mmho/m	1.000	0.000
Medium	0.000	0.000	mmho/m	7.590	503.393	mmho/m	1.000	0.000
LL3		7.500	V		1500.000	Ohm-m		
		0.000	V		20.000	Ohm-m		
		-7.200	V		3800.000	mmho-m		

After Survey Verification

Readings				Targets			Results	
	Zero	Cal		Zero	Cal		m'	b'
Deep	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
Medium	0.000	0.000	mmho/m	0.000	0.000	mmho/m	0.000	0.000
LL3		1.000	Ohm-m		1.000	Ohm-m		
		0.000	Ohm-m		0.000	Ohm-m		
		1.000	mmho-m		1.000	mmho-m		

Compensated Density Calibration Report

Serial-Model: GEAR3-GEARHART
Source / Verifier: 143 / 143
Master Calibration Performed: Tue May 28 03:33:01 2013

Master Calibration

	Density			Far Detector	Near Detector	
Magnesium	1.710	g/cc		971.18	557.33	cps
Aluminum	2.600	g/cc		212.31	367.26	cps
Spine Angle = 74.66				Density/Spine Ratio = 0.564		
	Size			Reading		

Small Ring	8.00	in	4.29	V	
Large Ring	14.00	in	6.24	V	
Compensated Neutron Calibration Report					
Serial Number:		6I			
Tool Model:		G			
CALIBRATION					
Detector	Readings		Target		Normalization
Short Space	1.00	cps	1.00	cps	1.0000
Long Space	1.00	cps	1.00	cps	1.0000
Gamma Ray Calibration Report					
Serial Number:		#8			
Tool Model:		OPEN			
Performed:		Mon Jun 13 16:56:43 2011			
Calibrator Value:		150.0	GAPI		
Background Reading:		0.0	cps		
Calibrator Reading:		175.0	cps		
Sensitivity:		0.8371	GAPI/cps		